

LAND AT LINDHURST FARM, NEAR MANSFIELD, NOTTINGHAMSHIRE

ARCHAEOLOGICAL EXCAVATION REPORT

NGR: SK 56054 58102
Planning Ref.: 2010/0089/ST
PCAS job no. 1292
Site code: LGMX 14

Prepared for

The Lindhurst Group

by

S. Markus & A. Lane

February 2015



Pre-Construct Archaeological Services Ltd
47, Manor Road
Saxilby
Lincoln
LN1 2HX

Tel. 01522 703800
e-mail info@pre-construct.co.uk

©Pre-Construct Archaeological Services Ltd

Contents

| | | |
|-------------|--|---|
| | Summary | 1 |
| 1.0 | Introduction | 2 |
| 2.0 | Location and description | 2 |
| 3.0 | Geology and topography | 2 |
| 4.0 | Planning background | 3 |
| 5.0 | Archaeological and historical background | 3 |
| 6.0 | Methodology | 4 |
| 7.0 | Results | 4 |
| 8.0 | Discussion and conclusions | 5 |
| 9.0 | Effectiveness of methodology | 6 |
| 10.0 | Project archive | 6 |
| 11.0 | Acknowledgements | 6 |
| 12.0 | References | 6 |

Figures

Figure 1: Site location plan at scale 1:25,000. The site is marked in red. OS mapping © Crown copyright. All rights reserved. PCAS Licence No. 100049278.

Figure 2: Position of excavation areas in relation to evaluation trenches. 1:5000. Inset trenching plan.

Figure 3: Area 1 plan (1:200) and sections (1:10)

Figure 4: Area 2 plan (1:200) and sections (1:10), with plan of additional trenching (1:1250) and representative section (1:20)

Appendices

Appendix 1: Colour Plates

Appendix 2: Context Summary

Appendix 3: Borehole Survey results – Archaeological Services Durham University

Appendix 4: Oasis Summary

Colour Plates

Plate 1: Area 1 looking N

Plate 2: SE facing section Pit [102]

Plate 3: NE facing section pit [104]

Plate 4: Area 2 looking S

Plate 5: S facing section pit [202]

Summary

A programme of archaeological mitigation was undertaken on land at Lindhurst Farm, Mansfield, Nottinghamshire.

This proposed development site lies on the southern side of Mansfield, with the areas targeted in this second phase of the archaeological mitigation lying to the south of the A617 and Lindhurst Farm. Archaeological trial trenching in this area revealed three pits, and a scatter of prehistoric flints were recovered from the topsoil.

Two excavation areas, with an additional six smaller trenches, investigated the areas of the pits that had been revealed during evaluation. Only two further discrete features were revealed, probably post-medieval or modern in date, reflecting low level activity around the farms and Harlow Wood. No additional evidence of prehistoric activity was noted.

A borehole survey was also completed to characterise the deposits found at the north end of Field 21; the evidence confirms the presence of a palaeochannel in the natural stream valley in this part of the site. Deposits on the slope to the south are identified as lynchets, resulting from extensive ploughing.

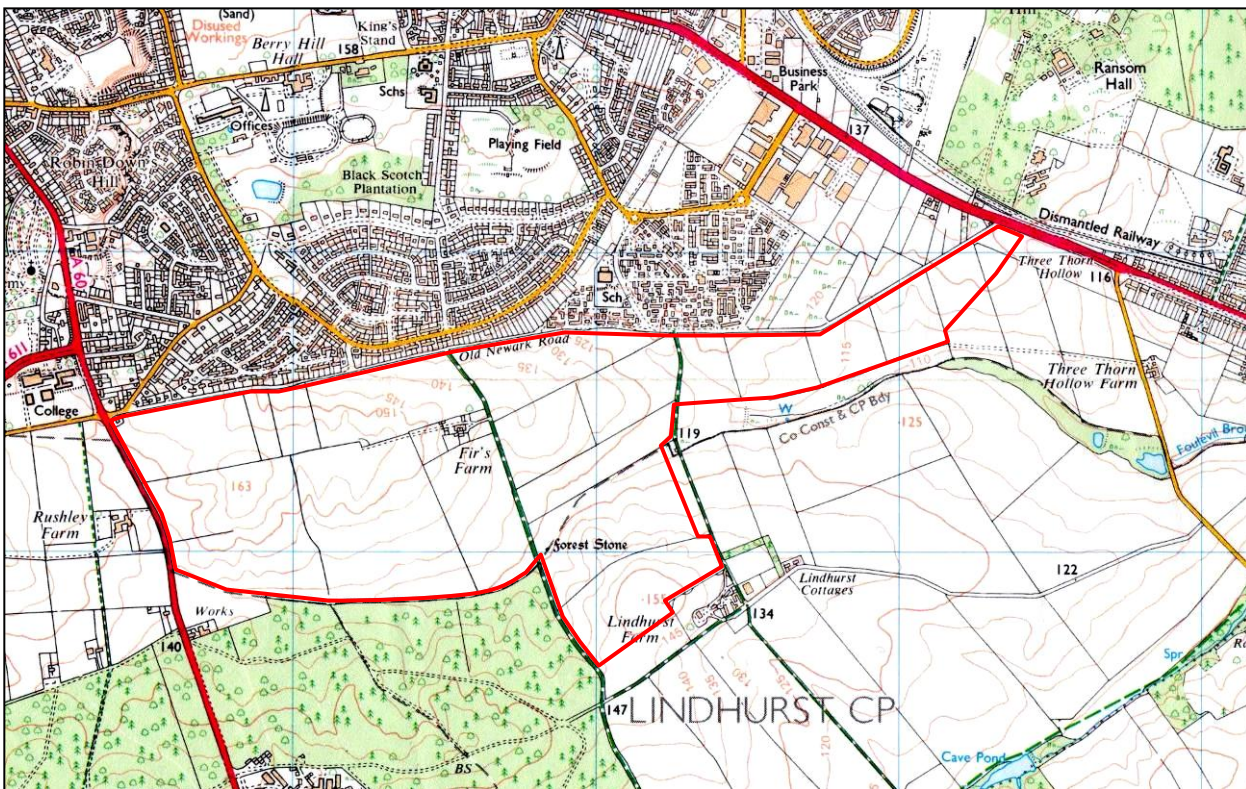


Figure 1: Location map of the proposed development at scale 1:25,000. The proposed development area is outlined in red. OS mapping © Crown copyright. All rights reserved. PCAS licence no. 100049278.

1.0 Introduction

Pre-Construct Archaeological Services Ltd (PCAS) was commissioned by The Lindhurst Group, to carry out a programme of archaeological mitigation and further evaluation on land at Lindhurst Farm, near Mansfield in Nottinghamshire.

The archaeological potential of the site had been investigated by geophysical survey, followed by targeted trial trenching; revealing low level archaeological remains in the form of a small number of unstratified Neolithic and Bronze Age flint tools and a series of burnt pits dating from the post medieval period. The results of these surveys were submitted with an application for outline planning permission for the site.

The Outline planning was granted conditionally; one of the requirements of the permission was the commissioning and completion of a scheme of archaeological excavation to ensure the identified archaeological remains were *preserved by record*.

2.0 Location and description (figs. 1 and 2)

The proposed development site covers an area of 169.3ha and is located on the southern edge of Mansfield. It lies either side of the east-to-west-running A617 (Sherwood Way) to the east of the A60 (Nottingham Road).

The site currently comprises open arable farmland and associated farmsteads. It is split into a northern and southern portion by Sherwood Way; its northern boundary is formed by the existing urban edge of Mansfield, with Harlow Wood marking its southern edge, otherwise delimited by field boundaries. The east and west site boundaries are defined by the A619 (Southwell Road West) and the A60 (Nottingham Road) respectively (DAS, 2010).

Two areas within the site have been selected for further archaeological excavation; both lie on the south side of the site, around Trench 22 of the preceding evaluation. Area 1 lay in the southern end of Field 21, c.118m from the existing field boundary. Area 2 lay in the southernmost field, Field 20, about 100m south of the same field boundary.

The central National Grid Reference of the site is SK 56054 58102.

3.0 Topography and Geology

No drift geology is recorded within the bounds of the proposed development area, which lies within a wide band of exposed Permo-Triassic Bunter Pebble Beds solid geology (BGS, 1966).

The site forms part of the Foulevil Brook valley, which flows eastwards from the A60 by Rushley Farm to its outfall into Rainworth Lakes, directly to the south-east of the site. The valley falls from 140m aOD at the west side of the site to below 100m aOD at Blidworth Lane, beyond its eastern end. To the south of the site, high points at Two Oaks Farm (167m aOD) and Lindhurst Farm (155m aOD) connect to form a ridge through Harlow Wood, descending to Rainworth Lakes along Lindhurst Lane. The highest point of the site (163m aOD) is immediately south of Sherwood Way at the western end; from this, a further ridge runs eastwards to and beyond Fir's Farm (DAS, 2010). A steep escarpment has been constructed to the immediate south of the A617 roundabout in the central part of the site, to the north of Field 20 (Bunn, 2010).

4.0 Planning Background

Outline planning permission for a mixed use development of land at Lindhurst was granted conditionally by Mansfield District Council (NCC planning ref. 2010/0089/ST). The provisional proposal was for a development of *'employment, commercial, residential, retail, healthcare, community, educational and leisure uses including the provision of a new primary school, local centre, community park, landscaping, habitat creation and infrastructure including roads, drainage and services'*.

An archaeological condition attached to the permission required a scheme of archaeological mitigation; to ensure that archaeological remains identified on the site were appropriately exposed and recorded, resulting in their effective preservation by record.

A scheme of archaeological investigation was proposed and accepted by the Planning Archaeologist for Nottinghamshire County Council; this document presents the results of this scheme.

5.0 Archaeological and historical background

A detailed historical background for the development area can be found in an archaeological desk-based assessment compiled by the University of Leicester Archaeological Services (Hunt, 2008). In summary, the only archaeological record appearing in the Nottinghamshire Historic Environment Record (HER) within the boundary of the proposed development site was a single find of a Bronze Age spearhead in the east side of Field 15 (HER ref. L2744).

The development site also contains a single Grade II Listed Building. The 'Forest Store' is an 18th century stone pillar, originally the central pillar of the Old Market House in Mansfield where the court of Swainmote was held before the Verderers of Sherwood Forest. The pillar is sited at the north-eastern corner of Harlow Wood, within the west side of Field 21 (plate 1), to mark the spot where the participants in the Swainmote met to hear those matters pertaining to the forest which were to be brought before the court when it sat in Mansfield (LB ref. 1/123; HER ref. ref. 5314).

A detailed fluxgate gradiometer survey and a rapid topsoil magnetic susceptibility survey were undertaken in 2010 as part of the archaeological evaluation of the site. The survey failed to identify clear indications of archaeological activity: the bulk of magnetic variation recorded was considered to reflect natural and modern features, including a preponderance of potential tree throws, recent boundaries and buried services. A number of weak linear anomalies could be identified as recently removed boundaries; a further weak linear feature in Field 13 may also have been a recently removed boundary, but potentially represented an archaeologically significant ditch, while a distinct curvilinear anomaly recorded in the north-west corner of Field 21 appeared to reflect a rubble-filled ditch or trench of indeterminate date (Bunn, 2010).

A trial trench evaluation consisting of twenty-two trenches was undertaken between December 2012 and March 2013. A total of 22 trenches were excavated across the site targeted on the potential anomalies identified by geophysical survey. Only four of the trenches contained any archaeological remains, indicating activity in two distinct phases: the prehistoric and the post-medieval periods.

Prehistoric activity is represented on the evaluation site by a single stratified flint flake ascribed to the Neolithic period, found in a pit in Trench 22, and by four further flint flakes retrieved from the topsoil in Field 20 which were dated to the Neolithic-Bronze Age. These finds suggest low-level, probably transitory, activity in the area, where new tools may have been manufactured to replace those lost or broken in the course of use.

Post-medieval activity is represented in a small collection of clay pipe stems found around Trench 9, and a series of small pits containing burnt material in Trenches 15 and 22. The purpose of these pits could not be confirmed in the course of the evaluation; however they were provisionally interpreted as being related to forestry related activity in Harlow Wood.

6.0 Methodology

The scheme of archaeological excavation took place prior to the start of any development to investigate the purpose and extent of the archaeological remains identified during the evaluation stage of the project. Two areas targeted around Trench 22 of the evaluation were machine excavated down to the first archaeologically sensitive layer, followed by the excavation of an additional six smaller trenches on the surrounding area to confirm the results. These works were undertaken using a machine fitted with a toothless bucket under archaeological supervision.

In addition to the trenching, an augur survey was undertaken in the vicinity of features identified as potential palaeochannels at the north end of Trench 22. This survey was undertaken by Archaeological Services Durham University, on the 9th-10th September. The full report on the results of the survey is included here as Appendix 3.

All exposed features were planned at a scale of 1:50 on a base plan, which was located using GPS. Trenches were located using GPS. Sections of features were drawn at scale 1:10, with representative sections at scale 1:20. Deposits were recorded on standard PCAS record sheets, and an excavation site diary was also kept; a digital photographic record, supplemented by colour slide photography, was made, and extracts from this are reproduced in Appendix 1. No artefacts were recovered during this scheme of excavation.

The archaeological fieldwork was carried out by Richard Mandeville and Ben Wheeliker, and took place between the 8th-16th September 2014 in dry but periodically overcast conditions.

7.0 Results

The scheme took places in two phases: the initial excavation of two set piece areas of strip, map and record, followed by the investigation of an additional six small trenches; positioned to flank the main excavation areas.

Area 1 of the excavation measured 32mx23m, and lay around 118m from the south boundary of Field 21 centred on pits that had been exposed in evaluation Trench 22. The earliest horizon encountered in Area 1 at a depth of c.0.35m was the natural geology (100); a very sandy clay of orange-brown hue, which was consistently encountered across the site during these works.

Cut into this were four discrete pits, two of which were confirmed as the pits previously excavated as features [2206] and [2208] in the evaluation Trench 22. The two new pits were situated to the west of the former Trench 22.

The northernmost of the new pits [102] lay c.1.5m to the northwest of pit [2208]: an irregular oval in plan, the pit was shallow with a double dip base, and contained a single fill of light – mid greyish brown silty sand (103).

Pit [104] lay around 12m west of pit [2206] and [2208] of the evaluation. This feature was also an irregular oval shape in plan, with a less pronounced double dip base, and contained three distinct fills. The earliest (105) was similar to (103) in colour and composition, with a profile to suggest a tip line from the north side of the feature. This was sealed on the south side of the pit by a deposit of

black silty sand (106) which contained occasional fragments of charcoal, and finally by (107), redeposited natural.

Area 2 of the excavation measured 16mx15m, and lay in Field 20 c.100m south of the northern field boundary, in the area where a pit was partially exposed in the evaluation Trench 22. Natural geology was encountered at a depth of c. 0.35m, beneath modern topsoil. The sole feature to be encountered in Area 2 was the same pit that had been partially exposed in the original evaluation trench. Pit [202] was the largest of the pits encountered in this excavation; oval in plan and measuring 2.25m along its longest axis. It had a regular profile, and contained a single fill of mid brownish grey sandy silt (203). A single fragment of coke was found within this fill.

To confirm the negative results of Area 2, six randomly placed additional small trenches were excavated in the surrounding area. Each of these trenches encountered the same stratigraphy; topsoil directly overlying natural deposits. No archaeological features were encountered.

Potential palaeochannel deposits as identified in the north end of evaluation Trench 22 were targeted in a borehole survey as part of the mitigation works. A NW-SE transect of 10 boreholes was completed in the area around [2213] of the evaluation; two further boreholes were recorded in the areas of features [2204] and [2205] of the evaluation. For positions of the boreholes, the reader is referred to Appendix 3.

The results of the survey confirm the presence of a palaeochannel at the north end of Trench 22 around [2213], in the natural stream valley of the Foulevil Brook which was culverted in the post-medieval period. Preservation conditions found at this location were such that no environmental evidence was recovered, thus it is not possible to reconstruct the conditions of the site, however the lack of peat in the cores suggested there was no standing water on the site. There were no potential palaeoenvironmental deposits noted in the remaining two cores, suggesting these features were lynchets rather than former channels (Appendix 3).

8.0 Discussion and Conclusions

No further evidence of prehistoric activity was recorded during the course of this excavation. As suggested by the evaluation results, it is likely that activity in the area during the late Neolithic and early Bronze Age was transitory, and perhaps related to hunting. Previously known prehistoric artefacts from the area, as identified in the desk-based assessment, support this theory; a disperse scatter of unstratified finds dating from this same broad period.

The two new pits revealed by the excavation contained no dateable finds, although the fragment of coke recovered from one of them, in addition to the information gathered in the evaluation, suggest these features all date from the later post-medieval period. Coke was first used in the UK in the late 17th century, but its use did not become widespread until the 19th century as the process of producing the coke was refined. It is therefore likely that this feature dates from the 19th or 20th century, and may, as suggested in the evaluation report, be related to small scale forestry activity in the neighbouring Harlow Wood. No further features were found in these open area excavations, or in the additional six trenches that were excavated around Area 2, suggesting very low level activity.

The investigation of the potential palaeochannel deposits confirmed the presence of a channel in the natural stream valley at the northern end of Field 20; however no palaeoenvironmental evidence was recovered due to preservation conditions. Two further potential palaeochannels were lynchets - ridges resulting from ploughing over an extended period of time.

9.0 Effectiveness of Methodology

The completed scheme of archaeological investigation revealed the targeted features, and confirmed these features were evidence of low intensity post-medieval/modern activity in the landscape. Evidence suggests this area has been utilised for arable farming for several generations. No further evidence of Prehistoric activity was identified, suggesting the flakes found during the trenching are residual resulting from background activity, perhaps relating to the palaeochannel at the base of the slope. The body of evidence collected is considered sufficient to inform and record the presence of the disperse archaeological remains identified on this site.

10.0 Project Archive

At the time of the preparation of the WSI and fieldwork, Newark and Sherwood were not accepting archaeological archives. A repository has since become available, and the paper only archive for this site will be deposited with Newark and Sherwood Museums.

11.0 Acknowledgements

Pre-Construct Archaeological Services would like to thank The Lindhurst Group for this commission.

12.0 References

British Geological Survey, 1966, *Ollerton: England and Wales 1:50,000 Series sheet 113, Solid and Drift Edition*. BGS, Keyworth, Nottingham.

Bunn, D., 2010, *Fluxgate Gradiometer Survey: Lindhurst, Mansfield*. Unpublished client report produced by Pre-Construct Geophysics.

Francis, K, 2014, *Specification for an Archaeological Mitigation Scheme, Proposed Lindhurst Development, Mansfield, Nottinghamshire*. WSI produced by PCAS Ltd.

University of Leicester Archaeological Services, nd, *Lindhurst Mansfield: Archaeology and Cultural Heritage*. Client report produced by University of Leicester Archaeological Services

Lindhurst, Mansfield: Design and Access Statement. Consulted online 28/02/2013 at <http://www.nsdcc.info/eplanning/default.aspx?sid=1&sinde=1&id=4&refno=10/00173/OUTM>

Newark and Sherwood District Council (NSDC), 2010: Planning application consulted online 28/02/2013 at <http://www.nsdcc.info/eplanning/default.aspx?sid=1&sinde=1&id=4&refno=10/00173/OUTM>

Ordnance Survey, 1997, *Sherwood Forest, Mansfield, Worksop & Edwinstowe: Explorer 1:25,000 Series no. 28*. Ordnance Survey, Southampton.

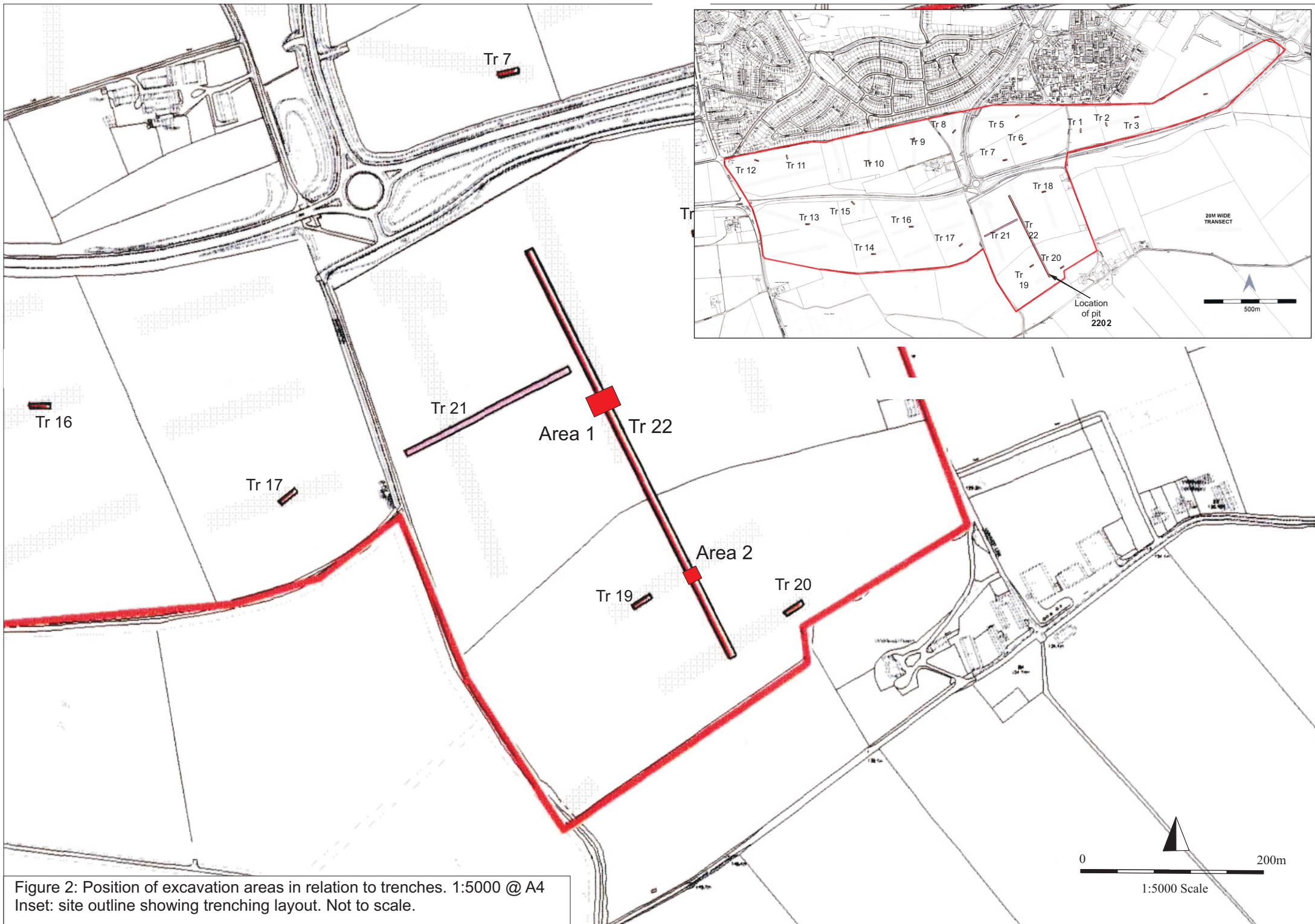


Figure 2: Position of excavation areas in relation to trenches. 1:5000 @ A4
 Inset: site outline showing trenching layout. Not to scale.

Figure 3: Area 1 plan (1:200) and sections (1:10)

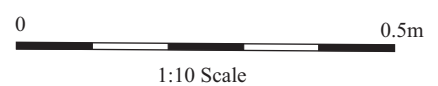
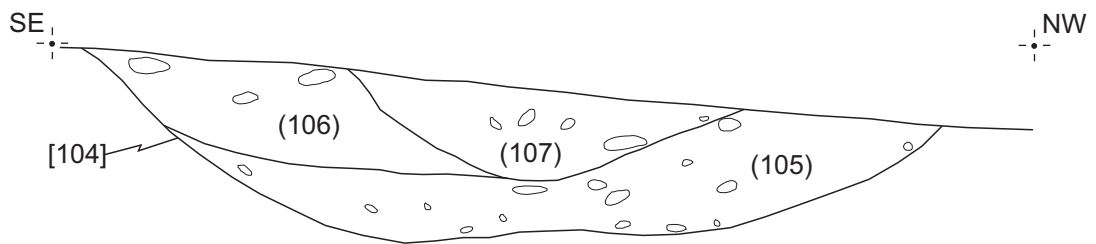
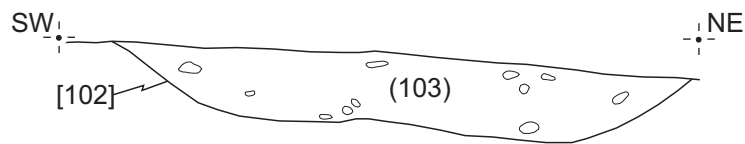
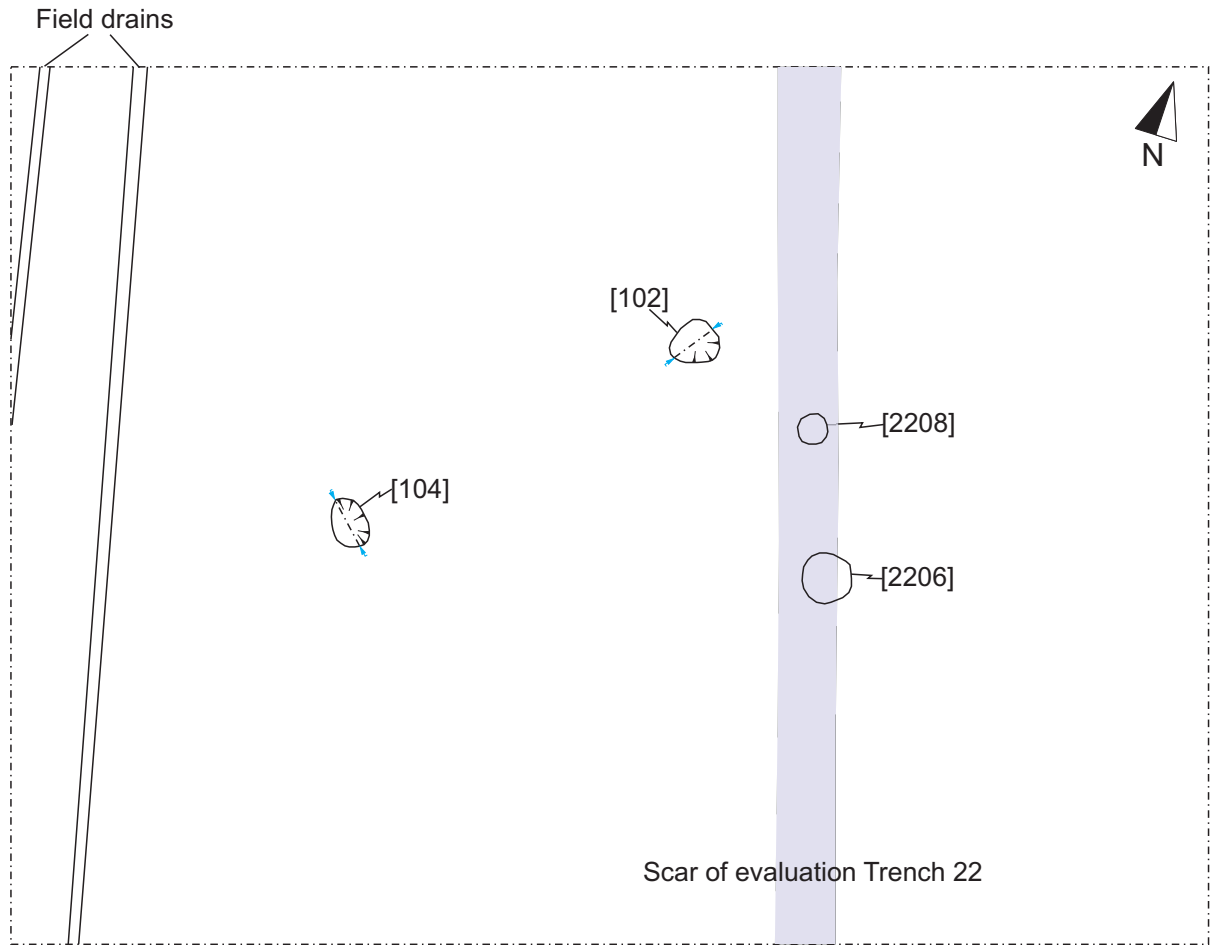
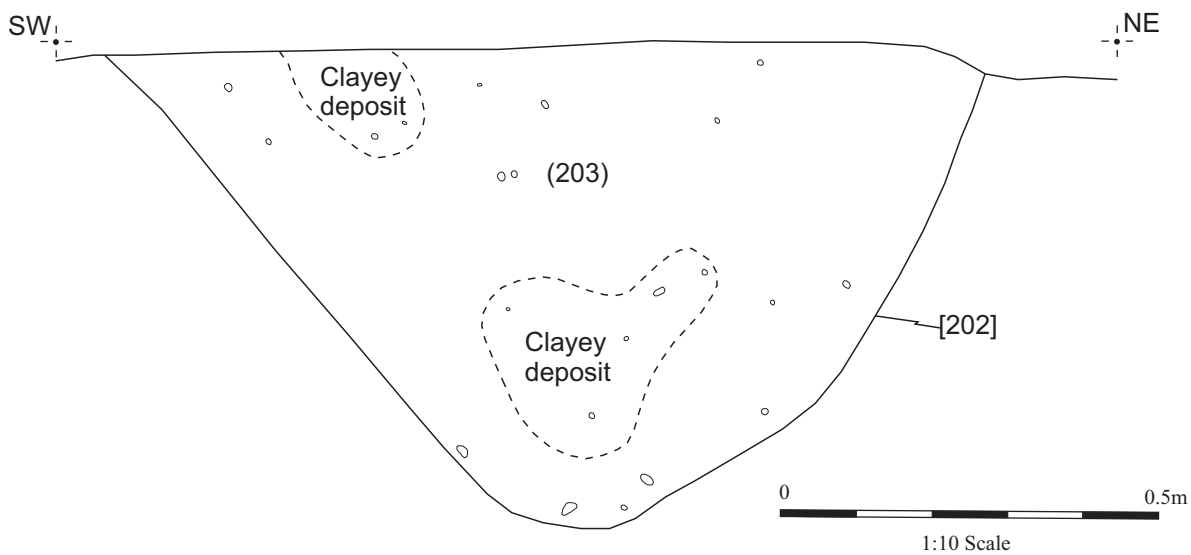
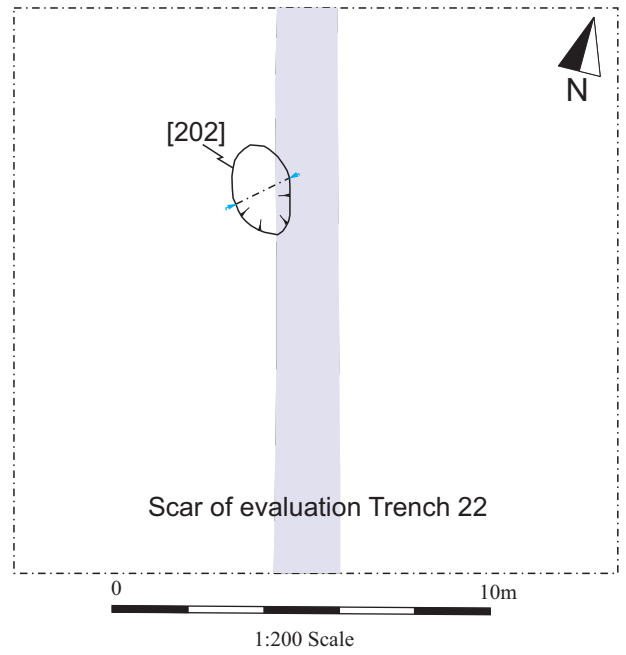
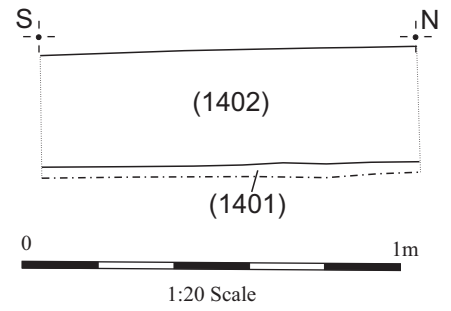
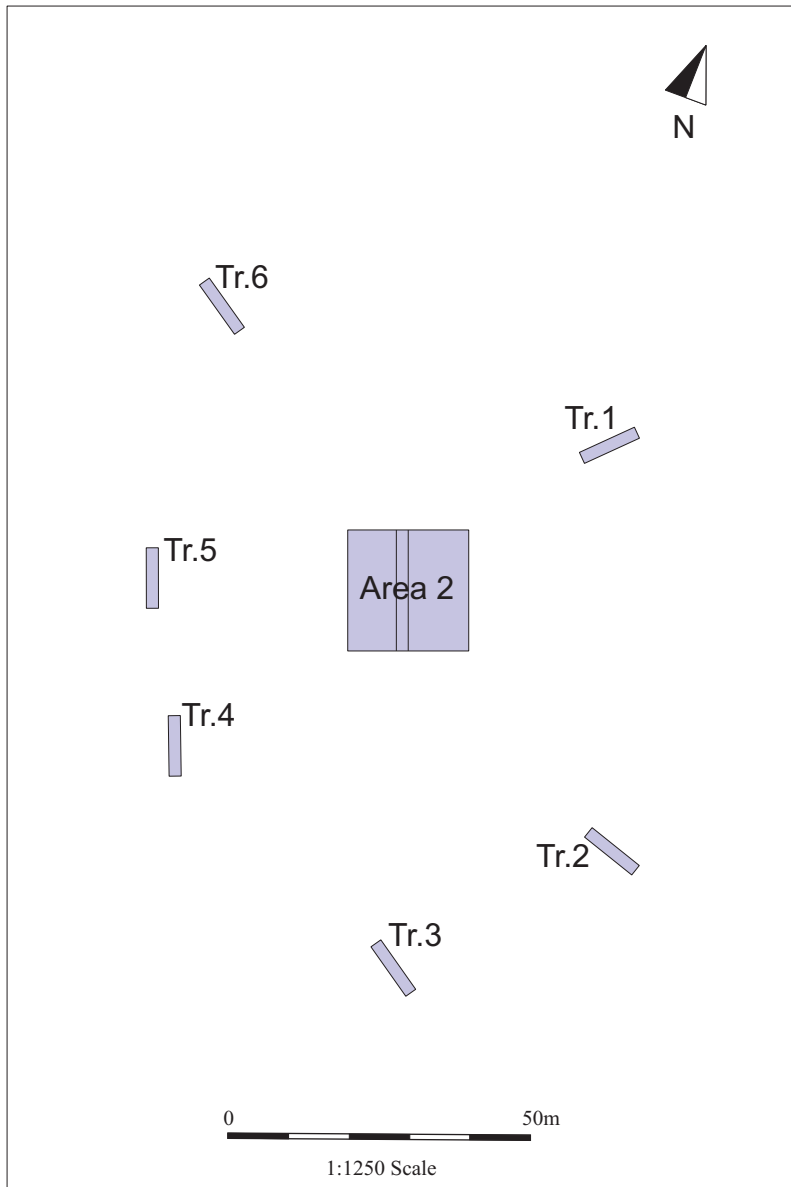


Figure 4: Area 2 plan (1:200) and section (1:10), with inset location plan of additional trenches (1:1250) and representative section 1:20



Appendix 1: Colour plates



Plate 1: Area 1 looking North



Plate 2: SE facing section of Pit [102]



Plate 3: NE facing section Pit [104]



Plate 4: Area 2 looking North



Plate 5: S facing section Pit [202]

Appendix 2: Context Summary

Area 1

| Context | Type | Description |
|---------|---------------|--|
| 100 | Layer | Reddish orangey pinkish sand with frequent rounded pebbles and occasional sandstone inclusions. Natural geology. |
| 101 | Layer | Mid greyish brown sandy silt with frequent rounded pebbles and occasional sandstone fragments. Depth 0.35m. Topsoil. |
| 102 | Cut | Cut of discrete pit. Roughly oval in plan with concave sides c.45° slope and irregular base. L 0.92m; W 0.79m; D 0.16m. |
| 103 | Fill of [102] | Light to mid greyish brown loosely compacted silty sand with infrequent sub-rounded pebbles. Single fill of [102]. |
| 104 | Cut | Cut of discrete pit. Roughly oval in plan with concave sides c.35° slope with irregular concave base. L 0.80m; W 1.12m; D 0.23m. |
| 105 | Fill of [104] | Mid brownish grey loosely compacted silty sand with small rounded pebble inclusions. Lower fill of [104]. Depth 0.16m. |
| 106 | Fill of [104] | Black ashy loose silty sand with occasional rounded pebbles. Depth 0.20m. |
| 107 | Fill of [104] | Mid brownish orange loose sand with occasional rounded pebbles. Upper fill of [104]. Depth 0.14m |

Area 2

| Context | Type | Description |
|---------|---------------|---|
| 200 | Layer | Orangey brown sandy clay with frequent rounded pebbles and stones. Natural geology. |
| 201 | Layer | Mid greyish brown sandy silt with frequent rounded pebbles and occasional sandstone fragments. Depth 0.35m. Topsoil. |
| 202 | Cut | Cut of discrete pit, partially exposed in evaluation Trench 22. Oval in plan with straight sides c. 60° slope and narrow concave base. L 2.25m; W 1.15m; D 0.64m. |
| 203 | Fill of [202] | Mid greyish brown loosely compacted sandy silt with occasional rounded pebble inclusions and patches of redeposited natural sandy clay. Fragment of coal found in this feature. |

Additional trenching

| Context | Type | Description |
|---------|-------|--|
| 1101 | Layer | Orangey brown sandy clay with frequent rounded pebbles and stones. Natural geology. |
| 1102 | Layer | Mid greyish brown sandy silt with frequent rounded pebbles and occasional sandstone fragments. Depth 0.35m. Topsoil. |
| 1201 | Layer | Orangey brown sandy clay with frequent rounded pebbles and stones. Natural geology. |
| 1202 | Layer | Mid greyish brown sandy silt with frequent rounded pebbles and occasional sandstone fragments. Depth 0.35m. Topsoil. |
| 1301 | Layer | Orangey brown sandy clay with frequent rounded pebbles and stones. Natural geology. |

| | | |
|------|-------|--|
| 1302 | Layer | Mid greyish brown sandy silt with frequent rounded pebbles and occasional sandstone fragments. Depth 0.35m. Topsoil. |
| 1401 | Layer | Orangey brown sandy clay with frequent rounded pebbles and stones. Natural geology. |
| 1402 | Layer | Mid greyish brown sandy silt with frequent rounded pebbles and occasional sandstone fragments. Depth 0.35m. Topsoil. |
| 1501 | Layer | Orangey brown sandy clay with frequent rounded pebbles and stones. Natural geology. |
| 1502 | Layer | Mid greyish brown sandy silt with frequent rounded pebbles and occasional sandstone fragments. Depth 0.35m. Topsoil. |
| 1601 | Layer | Orangey brown sandy clay with frequent rounded pebbles and stones. Natural geology. |
| 1602 | Layer | Mid greyish brown sandy silt with frequent rounded pebbles and occasional sandstone fragments. Depth 0.35m. Topsoil. |

on behalf of
Pre-Construct Archaeological Services Ltd

Proposed Lindhurst Development
Mansfield
Nottinghamshire

borehole survey

report 3541
October 2014

Contents

| | | |
|---------------------------|--------------------|---|
| 1. | Summary | 1 |
| 2. | Project background | 2 |
| 3. | Methods | 2 |
| 4. | Results | 3 |
| 5. | Discussion | 4 |
| 6. | Recommendations | 5 |
| 7. | Sources | 5 |
| Appendix 1: Borehole logs | | 6 |

Figures

| | |
|-----------|--------------------------------|
| Figure 1: | Site location |
| Figure 2: | Location of boreholes |
| Figure 3: | Borehole transect stratigraphy |

1. Summary

The project

- 1.1 This report presents the results of a palaeoenvironmental borehole survey conducted in advance of a proposed development at Lindhurst Farm, Mansfield, Nottinghamshire.
- 1.2 The works were commissioned by Pre-Construct Archaeological Services Ltd, and conducted by Archaeological Services Durham University.

Results

- 1.3 Laminated sands, humified silt and sandy silts were recorded in the borehole transect located near F2213. Pollen and plant macrofossils were not preserved in the humified silt. Deposits comprising palaeoenvironmental remains were not encountered in the boreholes associated with F2204 and F2205.

Recommendations

- 1.4 No further analysis is recommended due to the absence of deposits of palaeoenvironmental potential.

2. Project background

Location and background

- 2.1 The proposed development site is located on the southern edge of Mansfield, Nottinghamshire, centred on NGR SK 5450 5820 (Figure 1). During an archaeological evaluation conducted by Pre-Construct Archaeological Services Ltd, three features in Trench 22 were identified as possible palaeochannels [F2204, F2205 and F2213]. This report presents the results of a borehole survey undertaken in order to establish if deposits of palaeoenvironmental potential are present in the features.

Objective

- 2.2 The objective of the scheme of works was to undertake a borehole survey of the site in order to determine the location, nature and extent of palaeoenvironmental deposits.

Dates

- 2.3 The fieldwork was undertaken from 9th - 10th September 2014. Report preparation was conducted from 15th September to 3rd October 2014.

Personnel

- 2.4 The fieldwork was undertaken by Dr Charlotte O'Brien, Lorne Elliott and Mark Randerson. Palaeoenvironmental assessment and report preparation were by Dr Charlotte O'Brien with illustrations by Janine Watson.

Archive

- 2.5 The site code is **LGMX14**. The samples are currently in cold storage in the Environmental Laboratory at Archaeological Services Durham University.

3. Methods

- 3.1 A north-west/south-east transect of 10 boreholes at intervals of between 1-4m was undertaken to investigate the potential palaeochannel F2213 identified towards the northern end of Trench 22. The transect boreholes were labelled T4, T8, T10, T12, T14, T16, T18, T19, T20 and T24 (Figure 2). A single borehole was undertaken to investigate each of features F2204 and F2205, which were labelled B2204 and B2205 respectively. The boreholes were carried out using a hand auger with the locations and elevations recorded using a Leica GS15 global navigation satellite system (GNSS) with real-time kinematic (RTK) correction typically providing accuracy of ≤ 10 mm in horizontal plane and ≤ 15 mm in elevation. The sediment stratigraphy within the boreholes is described below and presented in Appendix 1 and Figure 3 (for T4-T24).
- 3.2 Dark brown humified silt was noted in five of the transect boreholes and was sampled from T10, T12 and T20. In the lab, pollen and plant macrofossil assessment was undertaken on these samples (samples 1, 2 and 4). For the pollen assessment, a small amount of sediment was mixed with distilled water, spread on a microscope slide, and examined at up to x500 magnification using a Leica DM2500 microscope. This technique allows a rapid, but non-quantitative method of establishing whether pollen is present in a sample. For the plant macrofossil assessment, 30ml of sediment were wet-sieved over a $150\mu\text{m}$ mesh and examined at up to x60 magnification using a Leica MZ7.5 microscope.

- 3.3 A fragment of charcoal was recovered from T16 (sample 3). The transverse, radial and tangential sections were examined at up to x600 magnification using a Leica DMLM microscope. Identification was assisted by the descriptions of Schweingruber (1990) and Hather (2000), and modern reference material held in the Environmental Laboratory at Archaeological Services Durham University.
- 3.4 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and resource agenda, which highlights the potential that palaeochannel deposits can offer for the study of environmental change (Monckton 2006).

4. Results

Borehole sediment stratigraphy

- 4.1 T4 was augered to a depth of 119.69 m OD. The stratigraphy comprised of light yellow brown sand overlain by dark brown sandy silt subsoil and ploughsoil.
- 4.2 T8 was augered to a depth of 119.08 m OD. Light yellow brown sand graded upwards into dark reddish brown silty sand. This was overlain by dark brown sandy silt subsoil and ploughsoil.
- 4.3 T10 was augered to a depth of 119.23 m OD. Light yellow brown sand graded upwards into dark brown sand. This was overlain by dark brown humified silt, of which an environmental sample (sample 2) was retained for laboratory assessment. There was a gradual transition to the overlying dark brown silt above which contained frequent pebbles.
- 4.4 T12 was augered to a depth of 118.98 m OD. Light yellow brown sand with pebbles graded into dark brown sand, and was overlain by dark brown humified silt, which was sampled (sample 1). Above this was dark brown sandy silt subsoil in which a small fragment of CBM was noted. The ploughsoil comprised of less consolidated sandy silt.
- 4.5 T14 was augered to a depth of 118.47 m OD. The lowest stratigraphic unit was a mixture of dark brown sand, silt and pebbles. The watertable was reached at the base of the borehole. Above this was grey brown sandy silt with small rounded pebbles and dark brown sandy silt subsoil and ploughsoil.
- 4.6 T16 was augered to a depth of 119.01 m OD. Light grey brown coarse sand with small rounded pebbles was overlain by grey brown sandy silt and dark brown sandy silt subsoil and ploughsoil. Fragments of coal and charcoal (sample 3) were noted in the subsoil.
- 4.7 T18 was augered to a depth of 118.97 m OD. Light grey and brown laminated sands were overlain by dark brown humified silt. Above this was dark brown sandy silt subsoil and ploughsoil. Coal was noted in the subsoil.
- 4.8 T19 was augered to a depth of 119.00 m OD. Reddish brown sand with rounded pebbles was overlain by dark brown humified silt. Above this was dark brown sandy silt subsoil and ploughsoil.

- 4.9 T20 was augered to a depth of 118.96 m OD. Reddish brown sand with rounded pebbles was overlain by dark brown humified silt which was sampled (sample 4). Above this was dark brown sandy silt subsoil and ploughsoil.
- 4.10 T24 was augered to a depth of 119.37 m OD. Pale brown laminated sand was overlain by dark brown compacted subsoil and less consolidated ploughsoil. CBM was noted in the subsoil.
- 4.11 B2204 was augered to a depth of 135.14 m OD. The basal unit was pale brown silty sand which was increasingly light in colour towards the base. This was overlain by dark brown sandy silt with pebbles.
- 4.12 B2205 was augered to a depth of 137.38 m OD. Reddish brown sand was overlain by dark brown sandy silt.

Pollen

- 4.13 Pollen and non-pollen palynomorphs were absent from the samples.

Plant macrofossils

- 4.14 Low numbers of *Cenococcum geophilum* sclerotia (soil fungus resting bodies) were noted in samples 1 and 4 and a few rush (*Juncus* sp) seeds were present in sample 1, but other plant remains were absent from the samples. Tiny flecks of charcoal were recorded, but could not be identified to taxon due to their small size.

Charcoal

- 4.15 The hand-recovered fragment of charcoal (sample 3) from borehole T16 was identified as Maloideae. This subgroup includes hawthorn, whitebeam, apple and pear, which cannot be differentiated anatomically.

5. Discussion

- 5.1 Feature F2213 is located towards the north end of Field 21 in the bottom of a shallow stream valley on the line of the culverted Foulevil Brook. The occurrence of laminated sands and well-rounded pebbles in the boreholes reflects the former presence of a channel. Dark brown humified silt in some of the boreholes suggests damp conditions within the valley bottom, however the absence of true peat deposits comprising palaeoenvironmental remains indicates that anaerobic conditions provided by permanently standing water were absent. As pollen, plant macrofossils and insects were not preserved, the sediments have no potential for reconstructing palaeoenvironmental conditions at the site. The occasional occurrence of coal, CBM and charcoal probably derives from slopewash or material used in the construction of the culvert.
- 5.2 Features F2204 and F2205 were located upslope of F2213 towards the southern end of Field 21. Deposits of palaeoenvironmental potential were not encountered in the boreholes. Considering their location on the valley slope and orientation parallel to the contours, it is possible that these linear features may represent the remains of lynchets rather than former channels.

6. Recommendations

- 6.1 No further analysis is recommended due to the absence of deposits of palaeoenvironmental potential.

7. Sources

Hather, J G, 2000 *The identification of the Northern European Woods: a guide for archaeologists and conservators*. London

Monckton, A, 2006 Environmental Archaeology in the East Midlands, in NJ Cooper (ed) *The Archaeology of the East Midlands: An Archaeological Resource Assessment and Research Agenda*, 259-286. Leicester

Schweingruber, F H, 1990 *Microscopic wood anatomy*. Birmensdorf

Appendix 1: Borehole logs

Borehole T4

| Description | Munsell | Height (m OD) | |
|--|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt | 10YR 3/2 | 120.39 | 119.71 |
| Light yellow brown medium sand with clay content | 10YR 6/6 | 119.71 | 119.69 |
| Not bottomed | | 119.69 | |

Borehole T8

| Description | Munsell | Height (m OD) | |
|---|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt. Small fragment of CBM noted at 119.46 m OD | 10YR 3/2 | 120.16 | 119.28 |
| Dark reddish brown silty sand | 5YR 3/4 | 119.28 | 119.10 |
| Light yellow brown medium sand with pebbles | 10YR 6/6 | 119.10 | 119.08 |
| Not bottomed | | 119.08 | |

Borehole T10

| Description | Munsell | Height (m OD) | |
|--|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles. Becoming darker towards the base of the unit. Gradual transition to unit below | 10YR 3/2 | 120.17 | 119.37 |
| Dark brown humified silt with fine sand. Sample <2> | 10YR 2/2 | 119.37 | 119.28 |
| Dark brown sand | 10YR 3/4 | 119.28 | 119.24 |
| Light yellow brown medium sand | 10YR 6/6 | 119.24 | 119.23 |
| Not bottomed | | 119.23 | |

Borehole T12

| Description | Munsell | Height (m OD) | |
|---|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles (unconsolidated) | 10YR 3/2 | 120.18 | 119.98 |
| Dark brown sandy silt subsoil (more consolidated). Small fragment of CBM noted at 119.48 m OD | 10YR 3/2 | 119.98 | 119.33 |
| Dark brown humified silt with fine sand. Sample <1> | 10YR 2/2 | 119.33 | 119.09 |
| Dark brown sand | 10YR 3/4 | 119.09 | 118.99 |
| Light yellow brown medium sand with pebbles | 10YR 6/6 | 118.99 | 118.98 |
| Not bottomed | | 118.98 | |

Borehole T14

| Description | Munsell | Height (m OD) | |
|--|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles | 10YR 3/2 | 120.22 | 119.70 |
| As above but darker brown, more compacted and with fewer pebbles | 10YR 3/6 | 119.70 | 119.27 |
| Grey brown silt with sand. Small rounded pebbles at the base of the unit | 10YR 5/2 | 119.27 | 119.25 |
| Mixed dark brown sand, silt and pebbles. Wet towards base. Possible disturbance due to proximity to culvert? | | 119.25 | 118.47 |
| Not bottomed | | 118.47 | |

Borehole T16

| Description | Munsell | Height (m OD) | |
|--|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles | 10YR 3/2 | 120.26 | 119.64 |
| As above but slightly darker and more compact. Coal noted at 62cm. Charcoal fragment <3> noted at 119.5 m OD | 10YR 3/6 | 119.64 | 119.16 |
| Grey brown silt with sand | 10YR 5/2 | 119.16 | 119.05 |
| Light grey brown coarse sand with small rounded pebbles | 10YR 6/3 | 119.05 | 119.01 |
| Not bottomed | | 119.01 | |

Borehole T18

| Description | Munsell | Height (m OD) | |
|---|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles | 10YR 4/6 | 120.38 | 119.73 |
| As above but slightly darker. Coal noted at 119.73 m OD | 10YR 3/6 | 119.73 | 119.26 |
| Dark brown humified silt with fine sand | 10YR 2/2 | 119.26 | 119.11 |
| Light brown sand with dark brown laminations | 10YR 5/6 | 119.11 | 119.05 |
| Light grey brown sand | 10YR 5/3 | 119.05 | 118.97 |
| Not bottomed | | 118.97 | |

Borehole T19

| Description | Munsell | Height (m OD) | |
|---|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles | 10YR 4/6 | 120.41 | 119.87 |
| As above but darker and more compact | 10YR 3/6 | 119.87 | 119.29 |
| Dark brown humified silt with fine sand. No pebbles | 10YR 2/2 | 119.29 | 119.11 |
| Reddish brown sand with rounded pebbles | 5YR 3/4 | 119.11 | 119.00 |
| Not bottomed | | 119.00 | |

Borehole T20

| Description | Munsell | Height (m OD) | |
|---|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles | 10YR 4/6 | 120.43 | 120.01 |
| As above but darker and more compact. Rounded pebbles | 10YR 3/6 | 120.01 | 119.37 |
| Dark brown humified silt with fine sand. Sample <4> | 10YR 2/2 | 119.37 | 119.22 |
| Reddish brown sand with rounded pebbles | 5YR 3/4 | 119.22 | 118.96 |
| Not bottomed | | 118.96 | |

Borehole T24

| Description | Munsell | Height (m OD) | |
|---|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles | 10YR 4/6 | 120.73 | 119.99 |
| As above but darker and more compact. Rounded pebbles. CBM noted at 119.87 m OD | 10YR 3/6 | 119.99 | 119.87 |
| Dark brown sand with fine laminations | 10YR 3/4 | 119.87 | 119.71 |
| Light brown sand | 10YR 5/3 | 119.71 | 119.37 |
| Not bottomed | | 119.37 | |

Borehole B2204

| Description | Munsell | Height (m OD) | |
|--|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles | 10YR 4/6 | 136.09 | 135.78 |
| Light brown silty sand, becoming increasingly light in colour and siltier towards the base | 10YR 5/6 | 135.78 | 135.14 |
| Not bottomed | | 135.14 | |

Borehole B2205

| Description | Munsell | Height (m OD) | |
|--|----------|---------------|--------|
| | | Top | Base |
| Dark brown sandy silt with pebbles | 10YR 4/6 | 138.28 | 137.93 |
| Reddish brown sand, becoming increasingly light in colour towards the base | 5YR 5/6 | 137.93 | 137.38 |
| Not bottomed | | 137.38 | |

Reproduced from Explorer 270 1:25 000 by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright 2011. All rights reserved. Licence number AL100002176



0 1km
scale 1:25 000 for A4 plot

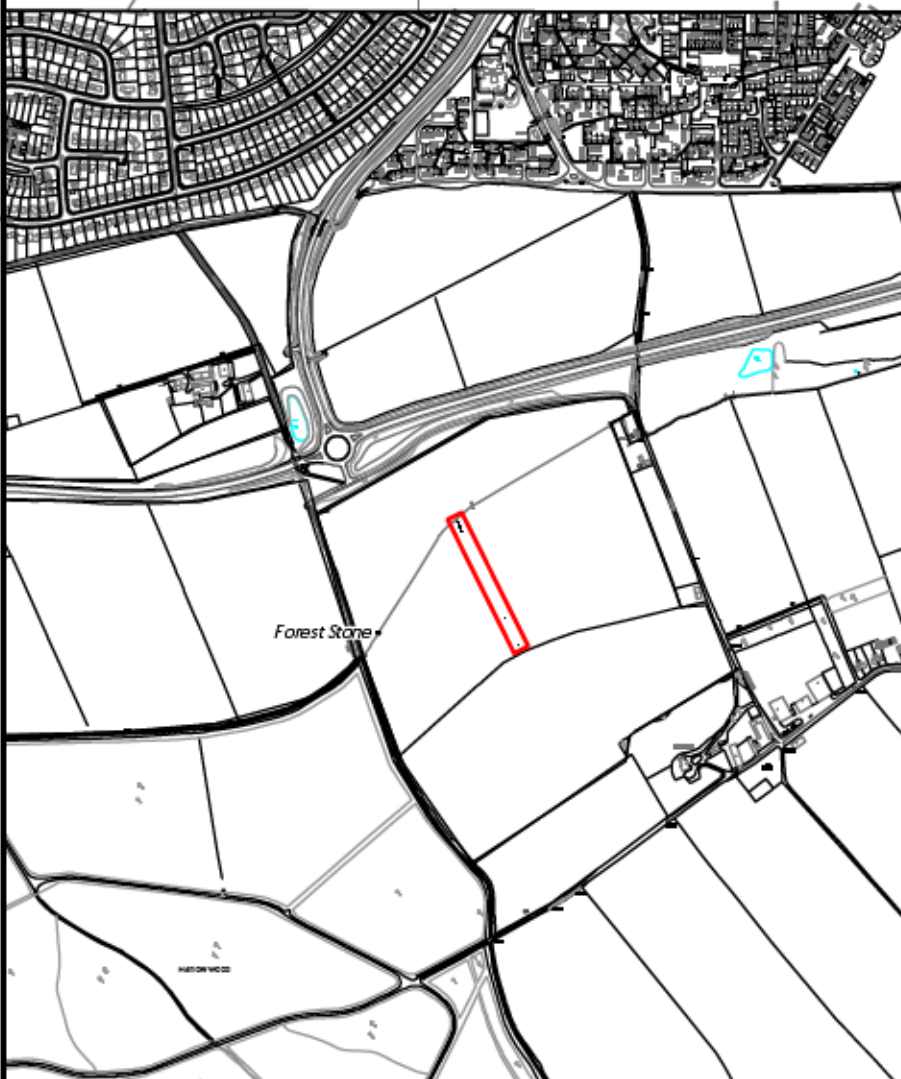
 borehole

Reproduction in whole or in part is prohibited without the prior permission of Pre-Construct Archaeological Services Ltd

582

581

■ T4
■ T8
■ T10
■ T12
■ T14
■ T16
■ T18
■ T19
■ T20
■ T24



■ B2205

■ B2204

560

561

ARCHAEOLOGICAL SERVICES
DURHAM UNIVERSITY

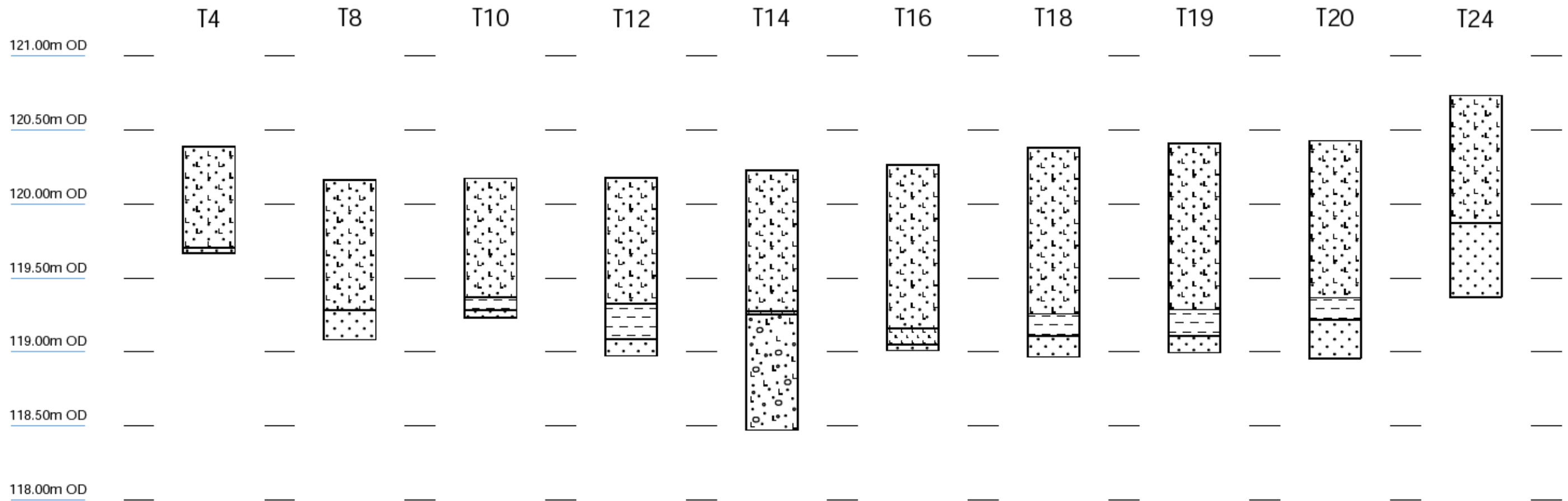
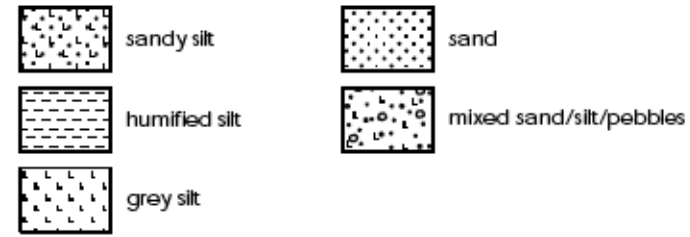
on behalf of
Pre-Construct
Archaeological
Services Ltd

0 50m
scale 1:1000 for A3 plot

Proposed Lindhurst development
Mansfield
Nottinghamshire

borehole survey
report 3541

Figure 2: Location of boreholes



OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Manage Projects](#) | [Search Projects](#) | [New project](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [Log out](#)

Printable version

OASIS ID: preconst3-202952

Project details

| | |
|--|--|
| Project name | Archaeological Excavation at Lindhurst, MANSfield, Nottinghamshire |
| Short description of the project | A programme of archaeological mitigation was undertaken on land at Lindhurst Farm, Mansfield, Nottinghamshire. This proposed development site lies on the southern side of Mansfield, with the areas targeted in this second phase of the archaeological mitigation lying to the south of the A617 and Lindhurst Farm. Archaeological trial trenching in this area revealed three pits, and a scatter of prehistoric flints were recovered from the topsoil. Two excavation areas, with an additional six smaller trenches, investigated the areas of the pits that had been revealed during evaluation. Only two further discrete features were revealed, probably post-medieval or modern in date, reflecting low level activity around the farms and Harlow Wood. No additional evidence of prehistoric activity was noted. A borehole survey was also completed to characterise the deposits found at the north end of Field 21; the evidence confirms the presence of a palaeochannel in the natural stream valley in this part of the site. Deposits on the slope to the south are identified as lynchets, resulting from extensive ploughing. |
| Project dates | Start: 08-09-2014 End: 16-09-2014 |
| Previous/future work | Yes / No |
| Any associated project reference codes | LGMX 14 - Sitecode |
| Type of project | Recording project |
| Current Land use | Cultivated Land 3 - Operations to a depth more than 0.25m |
| Monument type | PIT Post Medieval |
| Significant Finds | NONE None |
| Investigation type | "Open-area excavation" |
| Prompt | National Planning Policy Framework - NPPF |

Project location

| | |
|------------------|--|
| Country | England |
| Site location | NOTTINGHAMSHIRE MANSFIELD MANSFIELD Land at Lindhurst Farm, Mansfield |
| Study area | 2900.00 Square metres |
| Site coordinates | SK 56054 58102 53.1168524373 -1.16239709355 53 07 00 N 001 09 44 W Point |

Project creators

| | |
|------------------------------|---|
| Name of Organisation | Pre-Construct Archaeological Services Ltd |
| Project brief originator | Local Authority Archaeologist and/or Planning Authority/advisory body |
| Project design originator | Pre-Construct Archaeological Services Ltd |
| Project director/manager | Will Munford |
| Project supervisor | B. Wheeliker, R. Mandeville |
| Type of sponsor/funding body | Developer |

Project archives

| | |
|---------------------------|-----------------------------|
| Physical Archive Exists? | No |
| Digital Archive recipient | Newark and Sherwood Museums |
| Digital Contents | "none" |

| | |
|-------------------------|--|
| Digital Media available | "Images raster / digital photography", "Text" |
| Paper Archive recipient | Newark and Sherwood Museums |
| Paper Contents | "none" |
| Paper Media available | "Context sheet", "Diary", "Miscellaneous Material", "Photograph", "Plan", "Report", "Section", "Survey " |

Project bibliography 1

| | |
|-------------------------------|---|
| Publication type | Grey literature (unpublished document/manuscript) |
| Title | Land at Lindhurst Farm, Near Mansfield, Nottinghamshire |
| Author(s)/Editor(s) | Lane, A. |
| Other bibliographic details | PCAS report no. 1292 |
| Date | 2015 |
| Issuer or publisher | Pre-Construct Archaeological Services |
| Place of issue or publication | Saxilby, Lincolnshire |
| Entered by | Alison Lane (alison@pre-construct.co.uk) |
| Entered on | 6 February 2015 |

OASIS:

Please e-mail English Heritage for OASIS help and advice
© ADS 1996-2012 Created by [Jo Gilham](#) and [Jen Mitcham](#), email [Last modified Wednesday 9 May 2012](#)
Cite only: <http://www.oasis.ac.uk/form/print.cfm> for this page